

Appl. No. 10/673,613  
Amdt. dated September 1, 2006  
Reply to Office action of April 3, 2006

Docket No. 02RSC064US1

**Remarks/Arguments:**

Claims 18, 20, 23, 24, and 26- 33 remain in this application. Claims 1-17, 19, 21-22, and 25 have been canceled. Claims 18, 20, 23, and 24 were amended herein, and claims 26-33 were added.

**35 USC §112**

Claim 23 was rejected under 35 USC 112 as failing to comply with the enablement requirement as it states a thickness of "no more than 3mm" rather than a range of "1-3 mm". Applicant disagrees at least in part because the specification states that the processed region is preferably thin, and even with an example range of 1-3 mm given, one of average skill in the art would realize that "thin" could include regions with a thickness of less than 1 mm. However, for the sake of moving obtaining allowed claims quickly, Applicant has amended claim 23 to state "1 to 3 mm".

Claim 25 was rejected under 35 USC 112. This rejection is moot in light of the cancellation of claim 25.

**35 USC §103**

Claims 1-14 and 17-25 were rejected under 35 USC §103 as being unpatentable over Anderson (5024437) in view of Thomas et al. (5460317, hereinafter "Thomas") and Igarashi (5437088). The Applicant respectfully disagrees as the references teach "friction stir welding" rather than "friction stir processing". However, rather than continue to assert a different opinion on the meaning of the phrase "friction stir processing", Applicant has chosen to amend claim 18 to specifically exclude "friction stir welding", to add a new independent claim 26 having a similar recitation in place of cancelled independent claims 1 and 8, and to add other new claims. The rejection of the cancelled claims is moot, and the previously cited prior art does not support a rejecting of the current claims as they do not, individually or in combination, teach or suggest all the elements of any of the pending claims.

More particularly, claim 18 was amended to recite: "An improved golf club head including a face having a surface for contacting a golf ball, wherein the improvement comprises: a friction stir processed region of the face surface having, by virtue of the friction stir processing, a local

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fine grained microstructure whose mechanical properties are distinct from the mechanical properties of other portions of the head; and the friction stir processed region is not adjacent to an insert attached to the golf club face.” Support for this amendment can be found in: figure 1 which clearly shows a golf club head where there is no gap or boundary adjacent to the processed region; figure 2 which shows hardness increasing as depth increases rather than an initially constant hardness followed by a second constant hardness as one would expect if an insert were used; the background discussion of why inserts are not desirable; the examples; the portions of the application describing the preferred embodiments; and the meaning of “friction stir processing”.

It should be noted that the reason asserted in the office action for using friction stir welding was to attach the face plate of Anderson. Without a face plate, there is no reason to utilize friction stir welding of Thomas on a golf club head.

Claims 23 and 24, in addition to being patentable based on their dependence on claim 18, are also patentable because they recite additional elements not found in any of the cited references.

In regard to claim 26, it should be noted that the claim recites: “friction stir processing the predetermined surface region of the workpiece without adding or welding material to the predetermined surface region.” As with claim 18, support for this limitation can be found in: figure 1 which clearly shows a golf club head where there is no gap or boundary adjacent to the processed region and the grain structure does not show a material change between the processed region and the remainder of the club head; the background discussion of why inserts are not desirable; the examples; the portions of the application describing the preferred embodiments, and meaning of “friction stir processing”.

Claims 27-33, in addition to being patentable based on their dependence on claim 26, are also patentable because they recite additional elements not found in any of the cited references.

### Summary

It is believed that the case is now in condition for allowance, and an early notification of the same is requested. As this application has already been subjected to multiple RCE's, it is

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requested that the Examiner participate in a telephone interview with the undersigned attorney at the listed telephone number if the amendments included herein do not result in allowance of the pending claims.

**Petition for Extension of Time**

Applicants hereby petition, under 37 C.F.R. §1.136(a), to extend the time period for reply to the office action by two months, to September 3, 2006. Authorization to charge the appropriate fee for doing so to deposit account 18-1750 is provided herein.

**Authorization to Charge Deposit Account 18-1750**

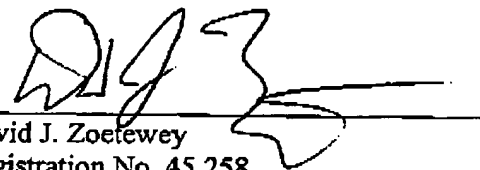
If an authorization to charge fees in this application to a deposit account is not already be on file, the undersigned hereby authorizes the Director to charge any fees which may be required, or credit any overpayment, to deposit account 18-1750.

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:  
Commissioner for Patents, P.O. Box 1450,  
Alexandria, VA 22313-1450 on the date shown below:

By: \_\_\_\_\_

\_\_\_\_\_  
SignatureDated: September 1, 2006

Very truly yours,

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